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MC 722 - 90 CHANNEL MARINE RADIOTELEPHONE OWNER'S MANUAL

UNIDEN MC 722

The UNIDEN MC 722 VHF marine radio transceiver has been designed to give you a rugged reliable instrument that will provide you with years of trouble-free service. You are encouraged to thoroughly read this manual to acquaint yourself with the characteristics and operation of your transceiver so that you can contribute to the longevity of your investment.

With proper care and maintenance, your UNIDEN MC 722 will outlast your present vessel and serve you well on board several more. The full features and flexibility designed into this quality transceiver will prevent it from becoming obsolete regardless of changes in craft or geographic locations. The unit may be mounted in any number of convenient locations by utilizing the universal mounting bracket. All legally available Australia and international channels are provided. The technical excellence of the UNIDEN MC 722 is demonstrated by the multiplicity of uses for which it has been found acceptable by the Department of Communications. The UNIDEN MC 722 is acceptable for compulsory use on "party boats," for use on vessels subject to the Great Lakes Radio Agreement or bridge-to-bridge requirements, for Canadian registered craft, for general pleasure and commercial vessels and certain land stations in marine service.

The UNIDEN MC 722 is of all solid state design with conservatively rated rugged components and materials compatible with the marine environment. The transceiver utilizes gaskets, sealing rings, waterproof membranes and other sealants to effect a splashproof housing for protection of the electronics.

INSTALLATION

CAUTION: The MC 722 will operate only with a nominal 12 volt negative ground battery system.

CHOOSING A LOCATION

1. Select a location that is free from spray and splash.
2. Select a location that minimizes exposure to direct sunlight (including that coming through windows).
3. Select a location that allows free air flow around the heat sink on the rear of the radio.
4. Select a location well away from the ship's compass. Auxiliary speakers also should be located away from the compass.
5. Select a location as close to the battery as possible (in order to keep battery leads as short as possible). Direct connection to the battery is most desirable. If direct connection cannot be made with the supplied power lead, any extension should be made with at least #10 AWG wire.

ENGINE NOISE SUPPRESSION

Interference from the impulse noise generated by the electrical systems of engines is sometimes a problem with radios. The MC 722 has been designed to be immune to ignition impulse noise and alternator noise. However, in some installations it may be necessary to take measures to further reduce the effect of noise interference. All DC battery wires, antenna leads and accessory cables should be routed away from the engine and engine compartments and from power cabling carrying particularly high currents.

In severe cases of impulse noise interference, it may be necessary to install a noise suppression kit that is available from your UNIDEN Dealer.

ANTENNA CONSIDERATIONS

1. Keep the antenna lead as short as possible. Long antenna leads can cause substantial loss of performance for both receiving and transmitting.
2. Locate your antenna as high as possible and clear from metal objects. The reliable range of coverage is a direct function of antenna height. The general rules for antennas are: The more gain the greater the range and, the higher above the water line the greater the range.

MOUNTING CONSIDERATIONS

Keep in mind the flexibility designed into the MC 722 so that you can most conveniently use your radio. The points which should be considered are:

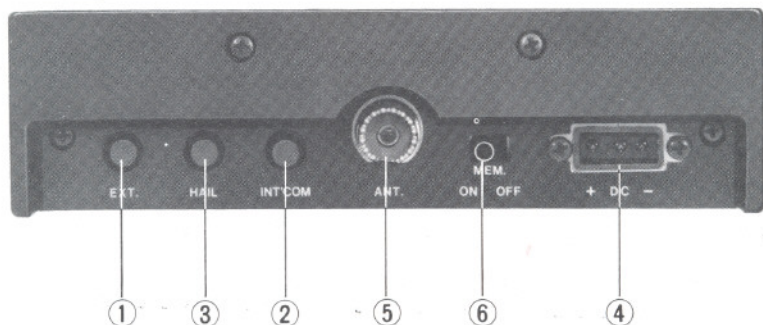
1. Universal mounting bracket may be installed on either top or bottom for shelf bulkhead, or overhead mounting.
2. The microphone connector faces forward allowing convenient in-dash or "built-in" installations.

3. The front panel can be fully reversed to provide for optimum viewing area, operating for any mounting position.
4. The EXTERNAL speaker jack may be used with an auxiliary speaker in lieu of the built-in speaker.
5. All connections are "plug-in" type for easy removal of the radio.

ACTUAL INSTALLATION

After carefully considering the various factors affecting choice of location, position the radio (with bracket, microphone, power plug, antenna plug and any auxiliary plugs installed) into the selected location to assure there is no interference with surrounding items. Mark the location of the mounting bracket. Remove the bracket from the radio and use it as a template to mark the holes to be drilled for the mounting hardware. Drill the holes and mount the bracket with hardware compatible with the material of the mounting surface. Install the power cable (red is +, black is -), antenna and all other auxiliary cables and accessories. Install the radio into the mounting bracket and connect all cables and accessories to the appropriate jacks and connectors.

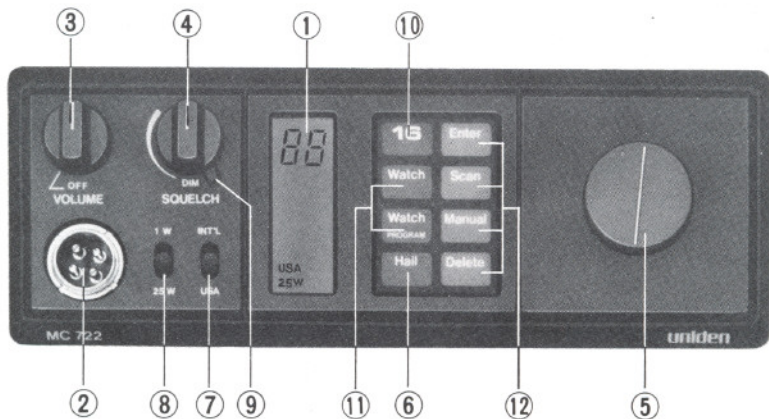
REAR PANEL CONNECTORS



1. **EXTERNAL SPEAKER CONNECTOR**--If it is desired to use a speaker other than the one in the radio, a four or eight ohm speaker equipped with a miniature phone plug may be connected to this jack. The internal speaker is disabled when an external speaker is used.
2. **INTERCOM CONNECTOR**--When using the intercom feature, a four or eight ohm speaker with a miniature phone plug should be connected to this jack. Refer to the section for intercom operation.

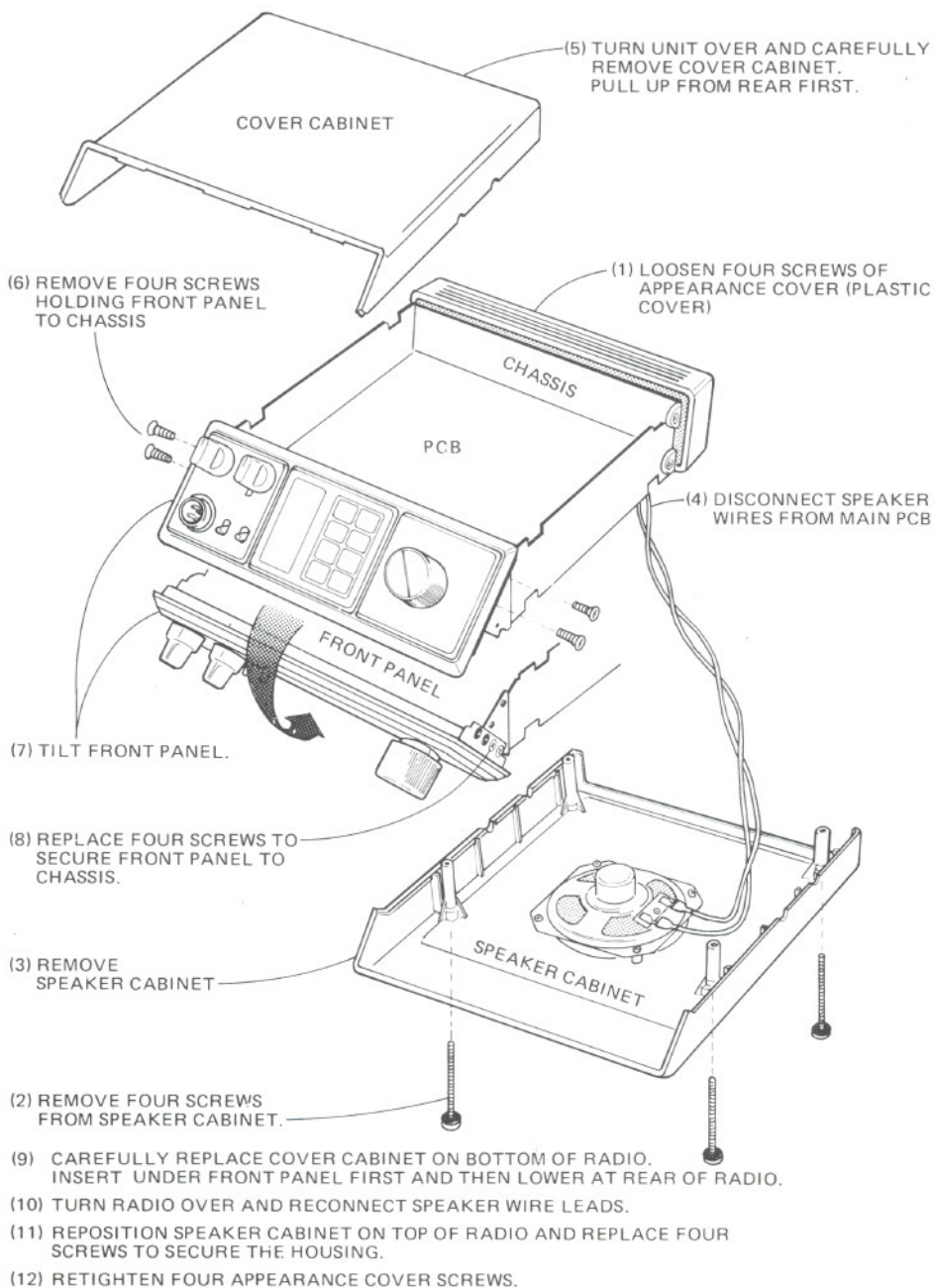
3. **HAIL CONNECTOR**--The speaker used for the hail function is plugged into this jack. The speaker may be either four or eight ohms impedance and should be suitable for the environment in which it is located. The plug must be a miniature phone plug.
4. **DC POWER CONNECTOR**--Battery connections are to be made with the cable supplied to mate with this connector. Remember, red is +, black is -! The power cord is equipped with a fuse to protect the radio. Use only a six (6) AMPERE fast blow fuse for replacement. Wire directly to battery for best result.
5. **ANTENNA CONNECTOR**--This connector is for connection of the antenna. A type PL259 connector is required to make proper connection.
6. **MEMORY SWITCH**--When this switch is "ON", the microprocessor is continuously energized. This retains the scan memory and programmed priority channel. The small amount of battery drain (3mA) caused by the continuous "ON" state of the switch is insignificant and will not cause a battery drain problem. **CAUTION!** If power is supplied through the ignition switch, the memory can be lost regardless of the position of the switch.

FRONT PANEL CONTROLS AND LCD DISPLAY



1. **LIQUID CRYSTAL DISPLAY (LCD)**--Provides indication of channel and functions even in brightest sunlight.
2. **MICROPHONE CONNECTOR**--Receptacle for microphone connection. When microphone is keyed, LCD displays "TX."
3. **ON/OFF-VOLUME**--Turns power on to radio and allows adjustment to the desired listening level with clockwise rotation. Whenever the power is turned on, radio automatically goes to Channel 16.

REVERSING THE FRONT PANEL



SPECIFICATIONS

GENERAL

Channels	: Transmit-55, Receive-90
Frequency Control Method	: PLL synthesizer and microprocessor
Antenna Impedance	: 50 ohms, nominal
Speaker (Internal)	: 2.85 inch, 8 ohms
Microphone	: Rugged 600 ohm dynamic element with coiled cord and plug-in connector
Channel Display	: LCD alpha numeric readout.
DOC Approval	: Type approved under Australia Department of Communications
Frequency Stability	: $\pm 0.0005\%$
Operating Temperature Range	: -20°C to $+50^{\circ}\text{C}$
Shock and Vibration	: Meets or exceeds EIA standards
Dimensions	: 7-1/4"W(185mm) x 9-7/8"L(250mm) x 2-1/4"H(58mm)
Weight	: 4.5 pounds
Controls	: On-off/volume, squelch and dimmer controls
Selector Switches	: 1W/25W, intl/USA, instant ch 16, watch, hail, scan, manual channel selector and memory backup
Program Switches	: Watch program, enter and delete
Connectors	: Antenna, microphone, external speaker, DC power, hail, intercom.
Frequency Range	: 156 to 158 MHz transmit, 156 to 163 MHz receive
Lights and Indicators	: Channel number and scan list status, TX, WX, WATCH, scan, hail, USA, international, 25W, 1W and back lighted key board.
Standard Accessories	: Plug-in microphone, mounting bracket and hardware. DC power cord, mike hanger, spare fuse, owner's manual, warranty card
Supply Voltage	: 13.8V DC negative ground
Standby Drain	: 1.2A at rated audio output — 0.6A squelched
Transmit Drain	: 4.5A at 25W output — 1A at 1W output

TRANSMITTER

Power Output	: 25 or 1 watt (switch selectable)
Modulation	: FM, ± 5 kHz deviation (FCC designator 16F3)
Hum and Noise Attenuation	: 45 dB
Audio Distortion	: Less than 5%
Spurious Emissions	: -70 dB
Output Transistor Protection	: Built-in
Output Power Stabilization	: Built-in automatic level control (ALC)

RECEIVER

Sensitivity	
20 dB quieting	: -114 dBm
12 dB sinad	: -117 dBm
Squelch Sensitivity (EIA)	: 0.20 μV
Spurious and Image Rejection	: 75 dB
Intermodulation Rejection	: 70 dB @ 0.3 μV
	: 50 dB @ 30 μV
	: 35 dB @ 300 μV
Selectivity (EIA)	: 70 dB
Audio Output Power @ 10%	
Dist with 4 ohm speaker	: 3.5 watts minimum
IF Frequencies	: 1st---21.4MHz, 2nd---455kHz
Hum and Noise Level (EIA)	: 50 dB

**VHF FM MARINE RADIOTELEPHONE
CHANNELS AND FUNCTIONS
(INTERNATIONAL CHANNEL)**

CHANNEL DESIG	FREQUENCY(MHz)		TYPE TRAFFIC	SHIP TO SHIP	SHIP TO SHORE
	SHIP	SHORE			
WX1	—	162.550	NOAA Weather	RX Only	RX Only
WX2	—	162.400	NOAA Weather	RX Only	RX Only
WX3	—	162.475	NOAA Weather	RX Only	RX Only
WX4	—	162.425	NOAA Weather	RX Only	RX Only
WX5	—	162.450	NOAA Weather	RX Only	RX Only
WX6	—	162.500	NOAA Weather	RX Only	RX Only
WX7	—	162.525	NOAA Weather	RX Only	RX Only
WX8	—	161.650	Can. Weather	RX Only	RX Only
WX9	—	161.775	Can. Weather	RX Only	RX Only
01	156.050	160.650	VTS	Yes	Yes
02	156.100	160.700	Port Ops	Yes	Yes
03	156.150	160.750	Port Ops	Yes	Yes
04	156.200	160.800	Port Ops	Yes	Yes
05	156.250	160.850	VTS	Yes	Yes
06	156.300	156.300	Safety	Yes	No
07	156.350	160.950	Com'l	Yes	Yes
08	156.400	156.400	Com'l	Yes	No
09	156.450	156.450	Com'l & Non Com'l	Yes	Yes
10	156.500	156.500	Com'l	Yes	Yes
11	156.550	156.550	Com'l	Yes	Yes
12	156.600	156.600	Port Ops	Yes	Yes
13	156.650	156.650	Navigational	Yes	Yes
14	156.700	156.700	Port Ops	Yes	Yes
15	156.750	156.750	Environmental	Yes	Yes
16	156.800	156.800	Safety Calling	Yes	Yes
17	156.850	156.850	State Control	Yes	Yes
18	156.900	161.500	Com'l	Yes	Yes
19	156.950	161.550	Com'l	Yes	Yes
20	157.000	161.600	Port Ops	Yes	Yes
21	157.050	161.650	Coast Guard	Yes	Yes
22	157.100	161.700	Coast Guard	Yes	Yes
23	157.150	161.750	Coast Guard	Yes	Yes
24	157.200	161.800	Public Corresp.	No.	Yes
25	157.250	161.850	Public Corresp.	No	Yes
26	157.300	161.900	Public Corresp.	No	Yes
27	157.350	161.950	Public Corresp.	No	Yes
28	157.400	162.000	Public Corresp.	No	Yes
60	156.025	160.625			
61	156.075	160.675			
62	156.125	160.725			
63	156.175	160.775			
64	156.225	160.825			
65	156.275	160.875	Port Ops	Yes	Yes
66	156.325	160.925	Port Ops	Yes	Yes
67	156.375	156.375	Com'l	Yes	No
68	156.425	156.425	Non Com'l	Yes	Yes
69	156.475	156.475	Non Com'l	Yes	Yes
70	156.525	156.525	Non Com'l	Yes	No
71	156.575	156.575	Non Com'l	Yes	Yes
72	156.625	156.625	Non Com'l	Yes	No
73	156.675	156.675	Port Ops	Yes	Yes
74	156.725	156.725	Port Ops	Yes	Yes
77	156.875	156.875	Port Ops	Yes	No
78	156.925	161.525	Non Com'l	Yes	Yes
79	156.975	161.575	Com'l	Yes	Yes
80	157.025	161.625	Com'l	Yes	Yes
81	157.075	161.675	Coast Guard	Yes	Yes
82	157.125	161.725	US Gov Only	Yes	Yes
83	157.175	161.775	Coast Guard	Yes	Yes
84	157.225	161.825	Public Corresp.	No	Yes
85	157.275	161.875	Public Corresp.	No	Yes
86	157.325	161.925	Public Corresp.	No	Yes
87	157.375	161.975	Public Corresp.	No	Yes
88	157.425	162.025	Com'l	Yes	No

CARE AND MAINTENANCE

Your MC 722 is a precision piece of electronic equipment and you should treat it accordingly. Due to the rugged design, very little maintenance is required, however, a few precautions should be observed.

If your radio has been accidentally subjected to spray or splash, you should immediately wipe it down with a soft cloth dampened with fresh water.

If the antenna has been damaged, you should not transmit except in the case of emergency. A defective antenna may cause damage to your radio.

You are responsible for the continued FCC technical compliance of your radio.

You are urged to arrange for periodic performance checks with your UNIDEN Marine Dealer.

SERVICE

Should you find it desirable or necessary to have service performed on your MC 722, you are urged to contact the UNIDEN Dealer from whom you made your purchase. He, or any other UNIDEN dealer is able to provide you with complete service performed by well qualified personnel.

If you require service that is within the terms of your warranty, you should present the validated WARRANTY CARD to your dealer to authenticate your claim. Your WARRANTY CARD is your passport to easy service. This card is to be completed by your dealer at the time of purchase. Other suitable documents which clearly establish ownership and date of purchase may be used in lieu of the WARRANTY CARD.

If you find it inconvenient to have service performed by your local UNIDEN Marine Dealer, you may also obtain service from the Factory Service Station. If you require factory service, please pack your radio in a suitable container which will provide adequate protection, enclose a note describing the problem, and a copy of your validated WARRANTY CARD, or other proof-of-purchase documents and return (transportation prepaid) to:

Santronic Agencies Pty Ltd.
13 Garema Circuit, Kingsgrove
Phone 758 1522
P.O. Box 12, Kingsgrove, NSW 2208

If the service you require is not within the terms of the warranty, you should specifically include written authorization to proceed with service and to agree to appropriate charges.

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12 MONTHS FULL WARRANTY

WARRANTOR. SANTRONIC AGENCIES PTY. LTD. 13 Garema Circuit, Kingsgrove NSW 2208 ("SANTRONIC").

ELEMENTS OF WARRANTY. SANTRONIC warrants, for the duration of this warranty, its UNIDEN Marine Product to be free from defects in materials and craftsmanship with only the limitation or exclusions set out below.

WARRANTY DURATION. This Warranty shall terminate and be of no further effect One (1) year after the date of original purchase of the Product or at the time the Product is (a) damaged or not maintained as reasonable and necessary, (b) modified, (c) improperly installed, (d) is repaired by someone other Warrantor for a defect or malfunction covered by this Warranty, or (e) used in a manner or purpose for which the Product was not intended.

PARTS COVERED. This Warranty covers all components of the Products.

STATEMENT OF REMEDY. In the event that the Product does not conform to this Warranty at any time while this Warranty is effective, Warrantor will repair the defect and return it to you prepaid, without charge for parts, service, or any other costs incurred by Warrantor or its representatives in connection with the performance of this Warranty. In addition, if the Product contains a defect or malfunction which is not repaired after a reasonable number of attempts by Warrantor to repair the Product, the Product or defective component will at our discretion, will be replaced without charge, when the defective product is delivered to the warrantor at 13 Garema Circuit Kingsgrove NSW 2208 free and clear of all liens and encumbrances. Please note that while the Product will be remedied under this Warranty without charge. **THIS WARRANTY DOES NOT COVER OR PROVIDE FOR THE REIMBURSEMENT OR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Some states do not allow this exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY. In the event that the Product does not conform to this Warranty, the Product should be shipped prepaid to Warrantor at 13 Garema Circuits Kingsgrove NSW 2208. **THE ORIGINAL OR COPY OF THE SALES RECEIPT OR OTHER VALID EVIDENCE OF THE DATE OF THE ORIGINAL PURCHASE MUST ACCOMPANY THIS PRODUCT.**

LEGAL REMEDIES. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Santronic

AGENCIES PTY. LTD.

13 GAREMA CIRCUIT, KINGSGROVE
PHONE 758 1522, TELEX AA73170
P.O. Box 12, Kingsgrove, NSW 2208

BRISBANE: 3/12 RANDALL ST
SLACKS CREEK, QLD 4127
PHONE 07 290 1188